

FARMLAND . . .

An Increasingly Valuable Asset

Sada L. Clarke

"Land is a many-splendored thing. To some, it is soil—how many bushels of corn will it raise? To others, it is a small piece of the earth's surface, rare as a gem, something to be cherished and enjoyed like an old masterpiece. To still others, it is space—something on which to build a home, an apartment, a shopping center."

—William H. Scofield,
"Values and Competition for Land"

"Meadow Farm to Be Sold." This headline, announcing the sale of the Caroline County, Virginia, birthplace of Triple Crown champion Secretariat and other champions such as Hill Prince and Riva Ridge, appeared in the *Richmond Times-Dispatch* late last September. One of the nation's most respected horse farms, the Meadow was a 2,600-acre land and breeding operation with a reported asking price of \$2,650,000. This pencils out to a little more than \$1,000 per acre. News stories have since revealed that the Meadow was purchased by a group of Virginia investors shortly after it was put on the market. The actual selling price was not disclosed, but it was said to be very close to the asking price. While the sale price will undoubtedly have a significant impact on the value of land nearby, it by no means sets a precedent. Farmland values per acre in 1974, for example, averaged \$1,000 or higher in nearly one-tenth of all the counties in Virginia.

For Would-Be Landowners Market values such as these are enough to discourage many potential owners of farm real estate, especially those thinking of buying farmland as an investment or those toying with the idea of purchasing a little tract in the country for retirement. Would-be buyers need to remember that the market value of farmland depends on its potential use.¹ Generally, the more intensive the use, the higher the price. A nationwide survey of

the price per acre and probable use of farmland five years after purchase, conducted during the year ended March 1, 1978, revealed that land expected to remain in agriculture sold for an average of \$595 per acre. Farmland to be used for forestry went for \$373—the lowest price. On the upper end, land sold for commercial and industrial development brought \$2,008 per acre, while tracts intended for rural residences went at \$1,024.

Land is selling at premium prices throughout much of the District and the nation. United States farmland, on the average, was valued at a record \$490 per acre on February 1, 1978. On that same date, farm real estate in the Fifth Federal Reserve District sold for an average of \$705 per acre—also a record. Average market values ranged from \$403 in West Virginia to \$1,578 in Maryland.

Would-be buyers of a complete farm, rather than part of a farm, will find that farm real estate values per farm have increased at a much faster rate than values per acre. This is due to the steady increase in the average size of farms. Today, for example, the value of a Fifth District farm averages around \$101,925, more than double its 1972 value. Values per farm range from \$71,300 in West Virginia to \$263,000 in Maryland. North Carolina, with a \$79,100 value per farm, has the second lowest average. Higher priced farms can be found in South Carolina, where the average is \$92,900, and in Virginia where the average value stands at \$118,800.

The potential buyer will also find that there are wide variations in the average values of farms, depending on the type of farm, its size, and the value of its sales. Tallies of the 1974 census revealed, for instance, that the value of land and buildings for

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¹ USDA, Economics, Statistics, and Cooperatives Service, *Farm Real Estate Market Developments*, CD-83 (Washington, July 1978), Table 37.

Fifth District farms with sales of \$2,500 and over averaged \$118,921 but ranged from a low of \$56,725 for farms with sales under \$5,000 to a high of \$1,091,059 for farms with sales of \$500,000 and over. The value of farmland and buildings per farm increased as the value of farm products sold rose. Similarly, the value of farm real estate on farms with sales of \$2,500 and over varied widely by type of farm. In South Carolina, for example, dairy farms, valued at \$242,262 per farm, had the highest average, while horticultural specialty farms with a \$56,612 price tag had the lowest. South Carolina tobacco farms, producers of the major source of farm income, were valued at an average of \$88,934 per farm.

For the Would-Be Owner of Farmland

The nation's farmland, on the average, was valued at a record \$490 per acre on February 1, 1978.

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Market values of District farms, according to the census, are relatively low when compared to market values nationally. This situation most likely results from the fact that the average size farm in the District is much smaller than the national average. Market values of 48 percent of all District farms were less than \$40,000 in 1974, for example, while the values of 29 percent ranged from \$40,000 to \$99,999. The remaining 23 percent were valued at \$100,000 and over. By contrast, only 33 percent of the nation's farms were valued at less than \$40,000, while 37 percent had market values of \$100,000 and over.

A Backward Glance The movements of District and national farmland values per acre have shown marked similarities since records began back in 1912. During much of this period—up through the mid-fifties, in fact—farmland prices followed the movements of farm prices and farm income. But in the years that have followed, with the exception of 1972 and 1973, farmland prices have continued to advance despite an irregular downtrend in farm income.

Much of the current boom in farmland values began back in 1972 with the huge grain sale to Russia. Farmland became such a favored investment that its market value in the District has jumped an average of 104 percent in the six years since, rising at an average annual rate of 12.6 percent. The largest rise in a single year occurred in 1973 when values zoomed an unprecedented 26 percent. The

only other year that gains in land values came close to equaling this increase was 1919, when the influence of World War I pushed values up 23 percent. But following the increase of 1919, farmland values turned downward, finally hitting bottom with the crash of 1933 when they plummeted almost 20 percent in a single year. Market values of farmland have moved steadily upward since the Great Depression, with only minor interruptions, mostly of one-year duration, occurring in 1938, 1949, and 1953.

The rise in farmland values accelerated notably after the start of World War II. District farm real estate values more than doubled by early 1949, responding in part to a sharp gain in farm income. They then fell slightly, largely because of a drop in farm prices and income that accompanied a downturn in overall economic activity.

The 1949 dip was of short duration, however. Values of farmland began to advance again with the outbreak of war in Korea in June 1950, rising by March 1953 to a new high some 30 percent above the pre-Korean level. They held at this new level through early 1954. Meanwhile, prices of farm products, which began to decline after reaching an all-time high in February 1951, dropped sharply by early 1954.

By mid-1954, farmland values in the District turned upward again despite continued declines in the prices and incomes received by farmers. The escalation in farm real estate prices has continued since, sometimes at a slower, sometimes at a faster, pace. Meanwhile, net farm income, except in 1972 and 1973, has continued on an irregular downward course, moving generally counter to farmland prices.

INFLUENCES IN THE LAND MARKET

Market values of farmland are controlled by the classic law of supply and demand.² Both supply and demand factors play strong roles in determining the price. When limited supplies offered for sale coincide with escalating bids from would-be purchasers, the market price climbs. The supply and demand equation is influenced by many factors whose importance varies widely, not only from state to state, but also from county to county, and even within the same county. Most of these factors reflect the different interests competing for farmland on the demand side. Farmers' demand for land to enlarge their farming operations is one of the strongest factors forcing prices upward. But the demand for land for non-

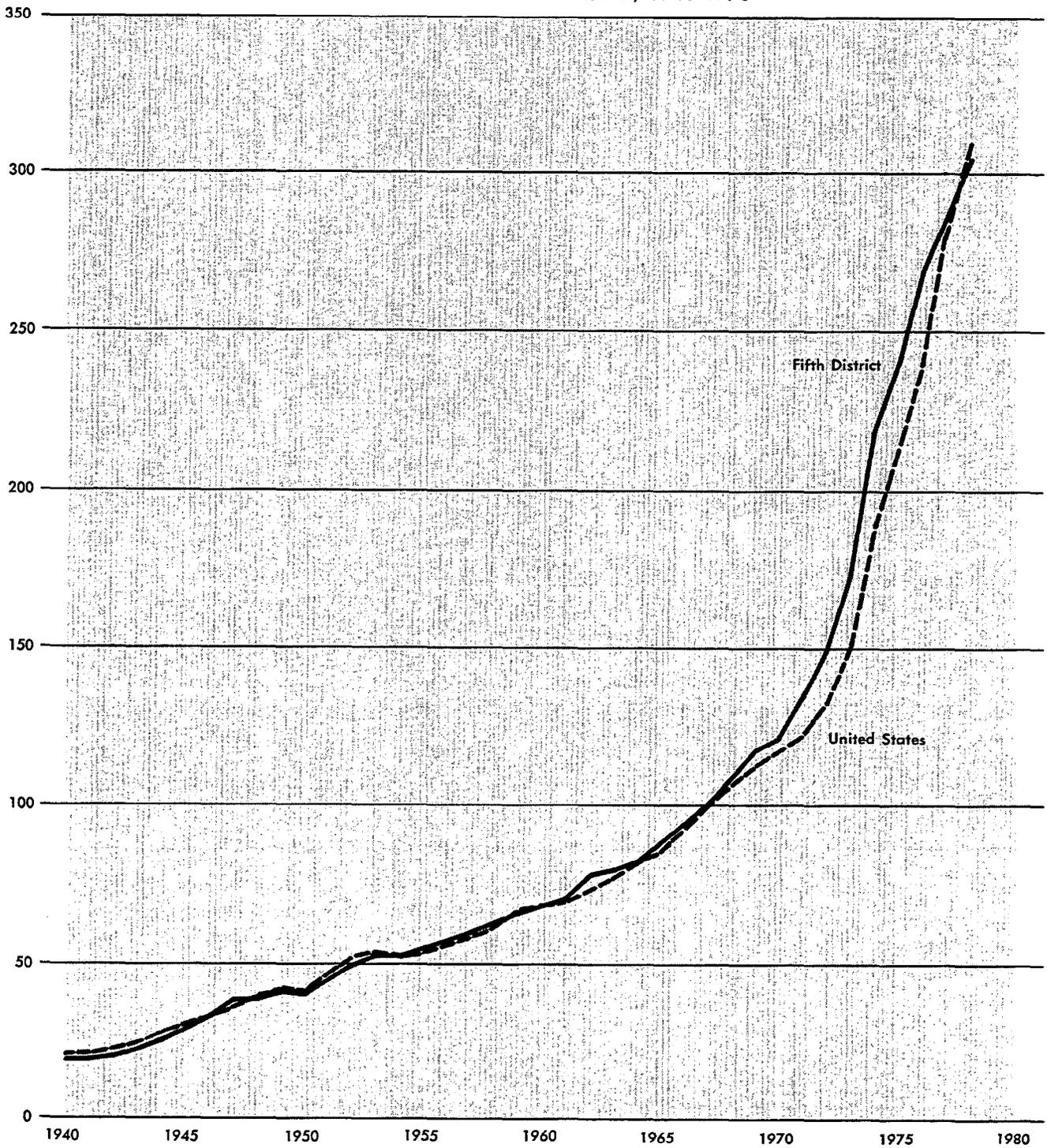
² USDA, Economic Research Service, "High Stakes in the Country," *The Farm Index*, Vol. XVI, No. 3 (Washington, March 1977), p. 11.

Chart 1

FARM REAL ESTATE: INDEX NUMBERS OF AVERAGE VALUE PER ACRE

United States and Fifth District, 1940-1978

1967 = 100



Note: Farmland and buildings, March 1 values for 1940-1975 and February 1 values for 1976-1978.

Source: U. S. Department of Agriculture.

farm uses has also become an increasingly important influence competing in farm real estate markets. A high rate of inflation, anticipated capital appreciation, tax shelters, and the disappointing performance of the stock market have been among the factors luring nonfarmers into the land-buying rush since 1972.

“For Sale” Signs Scarce The old timer who said “They’re not making anymore land”³ must have been thinking about the small supply and the scarcity of listings. The number of farms today is limited. But the number for sale is even more limited. Reportedly, only around 2 percent of the nation’s total acreage in farms typically changes hands each year. This situation sets the stage for stiff competition and higher bidding in the event of a sudden increase in demand for farmland.⁴

Voluntary and estate sales are generally assumed to reflect the supply of farmland put on the market in a given period.⁵ On this basis, the supply of farmland offered for sale has been trending downward since the midforties, although a temporary increase did occur during the 1972-1975 period of high net farm incomes. By 1978, voluntary and estate sales were only about one-fifth as large as they were during the record year 1944. This downturn in the supply of land for sale has been one of the prime factors influencing farmland values, especially in recent years.

Farmers Still Leading Buyers Farmers who want to enlarge their farming operations continue to be the number one purchasers of farmland, despite the growing competition from land-hungry nonfarm buyers. Farm expansion, the largest single reason for buying farmland, is definitely on the uptrend. Last year, for instance, almost 60 percent of all farmland transfers—up from less than 30 percent in 1954—were made to enlarge existing farms. Parcels or tracts sold for enlargement purposes usually bring better prices than those sold as complete farms. But since the turnover rate for farmland is generally low, farmers who want to expand will usually pay the price to meet their competition. When a neighboring farm is put on the auction block, it isn’t at all un-

common for farmers living close by to be the strongest bidders. They know that with the aid of present-day machinery and equipment, they can increase their volume of business and spread overhead costs over the additional acres, thus reducing average costs per unit of output.

Many farmers in the heart of the Virginia-Carolinas’ flue-cured tobacco-growing area have sought more land for still another reason: to increase their acreage allotments. Buying land that carries a tobacco allotment is the only realistic way to accomplish this since an allotment is tied to the land and not to the landowner. Such farmland is in strong demand and consequently it carries a much higher price tag than acreage which has no allotment.

“They’re not making anymore land.”

—Author Unknown

Growth in part-time farming has also contributed to the increasing demand for farmland.⁶ Part-time farmers in 1978, for example, bought 12 percent of all farm tracts sold nationally compared with only 6 percent in 1954. Because those farming part-time usually buy fewer acres than full-time farmers, they generally pay more per acre than do the full-time operators. In other words, the smaller the farm tract purchased, the higher the price per acre. During the year ended last March 1, for example, farm real estate transfers that were smaller than 100 acres typically commanded more than twice the price of the overall national average.⁷ The generally higher price of land bought by part-time farmers is also due to factors other than the “volume discount effect” cited. Part-time farms, for instance, are more likely to be located near cities, and the average price is higher because of the location.

Off-Farm Income Significant Farm families’ nonfarm income has become an important factor in the land market, enabling many of them to bid for the dwindling supply of land that is for sale (see Chart 2). Such earnings have shown a steady growth for many years, providing a supplement to farmers’ net farm income and increasing their ability to invest and to service real estate debt.⁸ The situation is especially true for farm operator families with farm

³ Bill Humphries, “They’re Not Making Anymore Land,” *News and Observer* (Raleigh, October 9, 1960), Sec. III, p. 1.

⁴ USDA, Economics, Statistics, and Cooperatives Service, “Real Estate,” *Farmers’ Newsletter*, G-3 (Washington, August 1978), p. 2.

⁵ Marvin Duncan, “Farm Real Estate Values—Some Important Determinants,” *Monthly Review*, Federal Reserve Bank of Kansas City (Kansas City, March 1977), pp. 6-7.

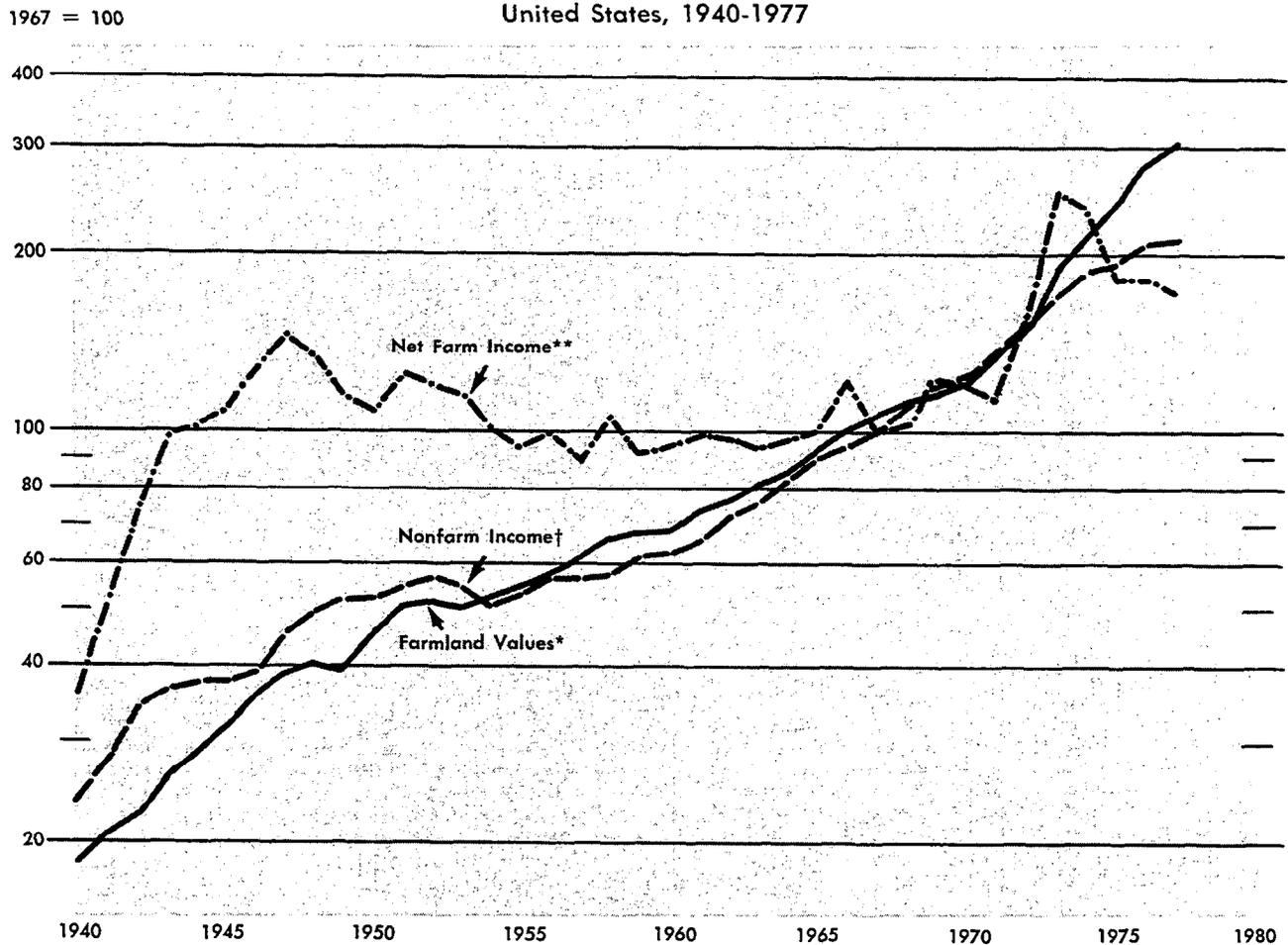
⁶ USDA, *Farm Real Estate Market Developments*, CD-83, Table 22.

⁷ USDA, *Farm Real Estate Market Developments*, CD-83, Table 38.

⁸ USDA, *Farm Real Estate Market Developments*, CD-83, p. 7.

FARMLAND VALUES AND FARMERS' NET FARM AND NONFARM INCOME

(Current Dollars)



* Land values per acre of the following year.

** Before inventory adjustment.

† Personal income of farm population from nonfarm sources.

Source: U. S. Department of Agriculture.

sales under \$10,000, for their average off-farm income is generally equal to, or far exceeds, their average debt.⁹

⁹ Readers may be interested in knowing that the U. S. Department of Agriculture's classification of farms by value of sales lists three classes with farm sales under \$10,000. Farm operator families in the \$5,000 to \$9,999 class had an average off-farm income in 1977 of \$12,179, around 120 percent of their average debt of \$10,195. Those with sales of \$2,500 to \$4,999 received an average off-farm income of \$14,559, far in excess of their debt which averaged \$6,727. The average farm family with sales valued at less than \$2,500, however, had off-farm earnings of \$15,077 compared with debt of only \$3,905. While these small farmers received the largest off-farm income, they also owed the least debt. See USDA, Economics, Statistics, and Cooperatives Service: **Farm**

By the midsixties, nonfarm earnings per farm family equaled the family's net farm income. But today's farm families, on the average, earn more from their sources of off-farm income than from their farming operations. Of each \$100 of income received by farm families in 1977, for instance, \$61 came from nonfarm sources. On the average, their total income from farm and nonfarm sources amounted to a little more than \$19,000. Of this sum, around \$7,400 was

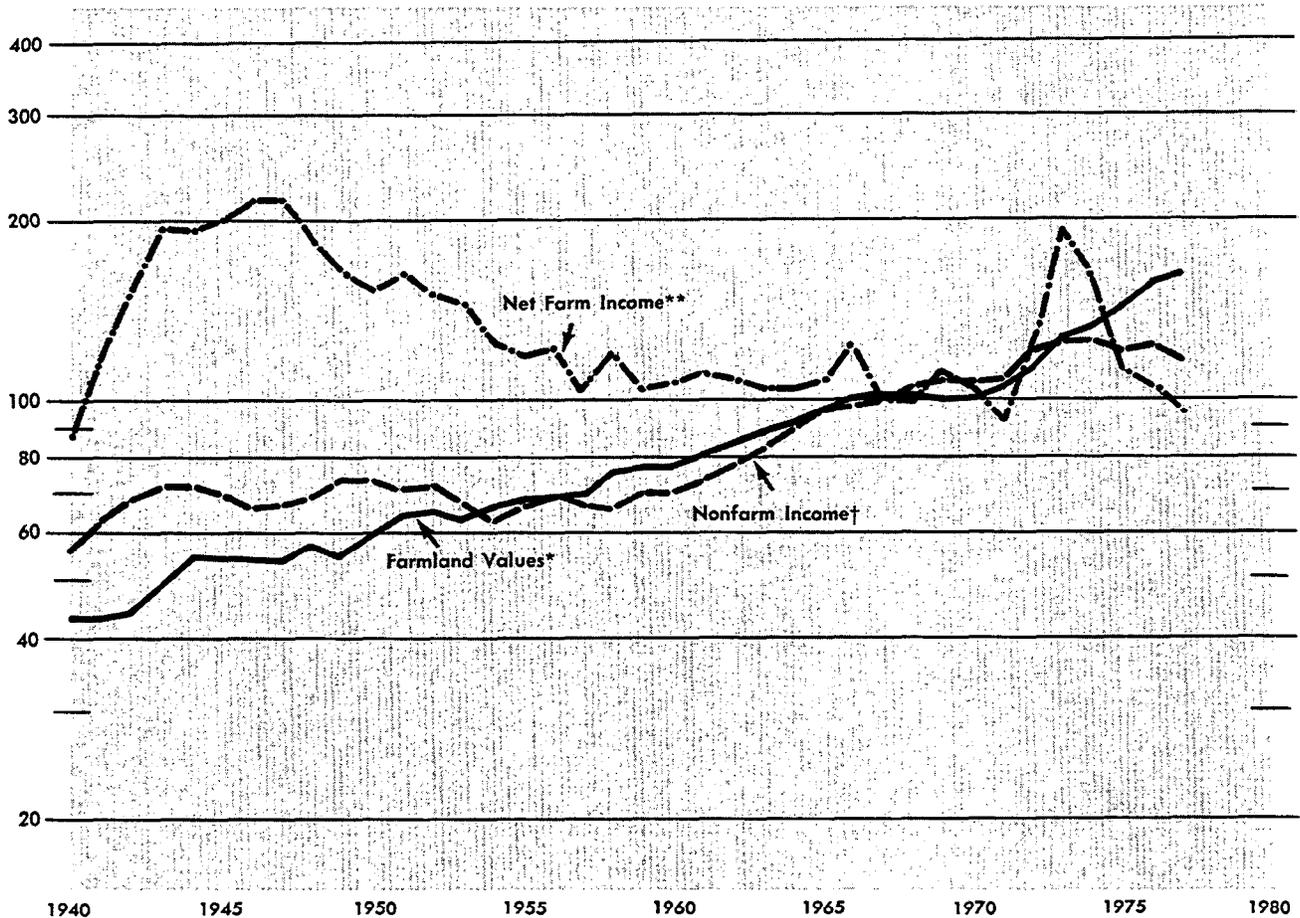
Income Statistics, Statistical Bulletin No. 609 (Washington, July 1978), Table 8D; **Balance Sheet of the Farming Sector, 1978**, Supplement No. 1 to Agriculture Information Bulletin No. 416 (Washington, October 1978), Table 33.

Chart 3

FARMLAND VALUES AND FARMERS' NET FARM AND NONFARM INCOME ADJUSTED FOR INFLATION

1967 = 100

United States, 1940-1977



* Land values per acre of the following year.

** Before inventory adjustment.

† Personal income of farm population from nonfarm sources.

Note: All data are deflated by the CPI, all items, 1967 = 100.

Source: U. S. Department of Agriculture.

net farm income and the remaining \$11,600 was income from sources off the farm.

While nearly all farm families have some off-farm income, such earnings are most important on small farms. Stated another way, nonfarm income generally becomes a larger share of total farm family income as the value of a farm's sales declines. Farm operator families whose farm sales in 1977 totaled \$100,000 and over, for example, earned 20 cents of every dollar of their total income from nonfarm sources. Those with farm sales of \$10,000 to \$19,999 had off-farm earnings amounting to 66 cents of each dollar of total income. But families with farm sales below \$5,000 depended on off-farm income for 91

cents of every dollar of their total earnings.

As noted earlier, net farm income, with the exception of 1972 and 1973, has generally moved counter to farmland values from the midfifties to the present. While net farm income has trended irregularly downward, values of farmland have continued to advance, a relationship that many see as a paradox. Meanwhile, off-farm income of farm operator families has continued upward, climbing at almost the same pace as farmland values until very recent years. The off-farm earning supplements to net farm income have contributed to the ability of some farmers, particularly those on small and part-time farms, to compete for and purchase additional farmland.

When these data are adjusted for inflation, the influence of nonfarm income on farmers' capacity to purchase land is even more evident. Real market values of farmland in early 1978 were more than double the 1960 level. Real net farm income in 1977, however, was 11 percent below the level in 1960. By contrast, farmers' real nonfarm earnings rose 66 percent during the same period (see Chart 3).

Farmland a Good Investment¹⁰ For much of the history of this country, many individuals who are not interested in farming have chosen to invest in farmland. Such investments have proven to be an effective hedge against inflation for more than 40 years. Many also view farmland as a safe and desirable long-term investment. Farmland prices, in fact, have outstripped consumer prices throughout the last 20 years. During that period, there has generally been a 2 percent average annual rate of increase in farmland values for every 1 percent average annual rate of gain in the Consumer Price Index.

"Real estate investments have yielded long-term returns equal to, or better than, other long-term investment alternatives."

—Robert D. Reinsel

Measured against the gross national product price deflator, the most comprehensive price index, few alternative investment opportunities since 1960 have been as profitable and as safe a hedge against inflation as has United States farmland. Farm real estate values have risen faster than this general price index each year. They have also increased much faster than Standard and Poor's average of 500 common stocks. During this period, farmland values climbed to more than four and one-half times the 1960 level, while the GNP price deflator more than doubled and

¹⁰ References for this section include: Jack Bickers, "Why the Southern Land Boom May Be Just Beginning," *Progressive Farmer*, Vol. 93, No. 7, July 1978, p. 15; Marvin Duncan, "Farm Real Estate: Who Buys and How," *Monthly Review*, Federal Reserve Bank of Kansas City (June 1977), p. 6; Robert G. Healy and James L. Short, "New Forces in the Market for Rural Land," *The Appraisal Journal*, Vol. XLVI, No. 2 (April 1978), pp. 190-192; Howard W. Hjort, Statement Before the House Agriculture Committee, Subcommittee on Family Farms, Rural Development and Special Studies (Washington, June 20, 1978), pp. 1-10; E. C. Pasour, Jr., "Farm Real Estate Prices in the United States and North Carolina," *Tar Heel Economist*, North Carolina State University (Raleigh, November 1976), p. 2; Robert D. Reinsel, "Land Rents, Values, and Earnings" (Paper presented at the meeting of the American Agricultural Economics Association, Edmonton, Canada, August 1973), pp. 11-12; Ted Vaden, "Duke U. Buys 1,222 Acres in North Wake," *News and Observer* (Raleigh, September 6, 1978), p. 1.

Standard and Poor's 500 common stock average rose only 71 percent. These comparisons clearly indicate that the average investor in farmland since 1960 has done much better than the average investor in the stock market (see Chart 4).

Last fall, Duke University, in an unusual investment initiative for an educational institution, joined the ranks of nonfarm investors when they bought a 1,222-acre tract of prime development land along the Neuse River in northern Wake County. Although the price was not disclosed, the announcement said the tract includes 9,000 feet of riverfront property. While noting that "... inflation was forcing schools to diversify their investments . . .," the Duke president was also quoted as saying, "... the Wake County purchase, we think, gives us an opportunity to make more money on our investment than stocks and bonds."¹¹

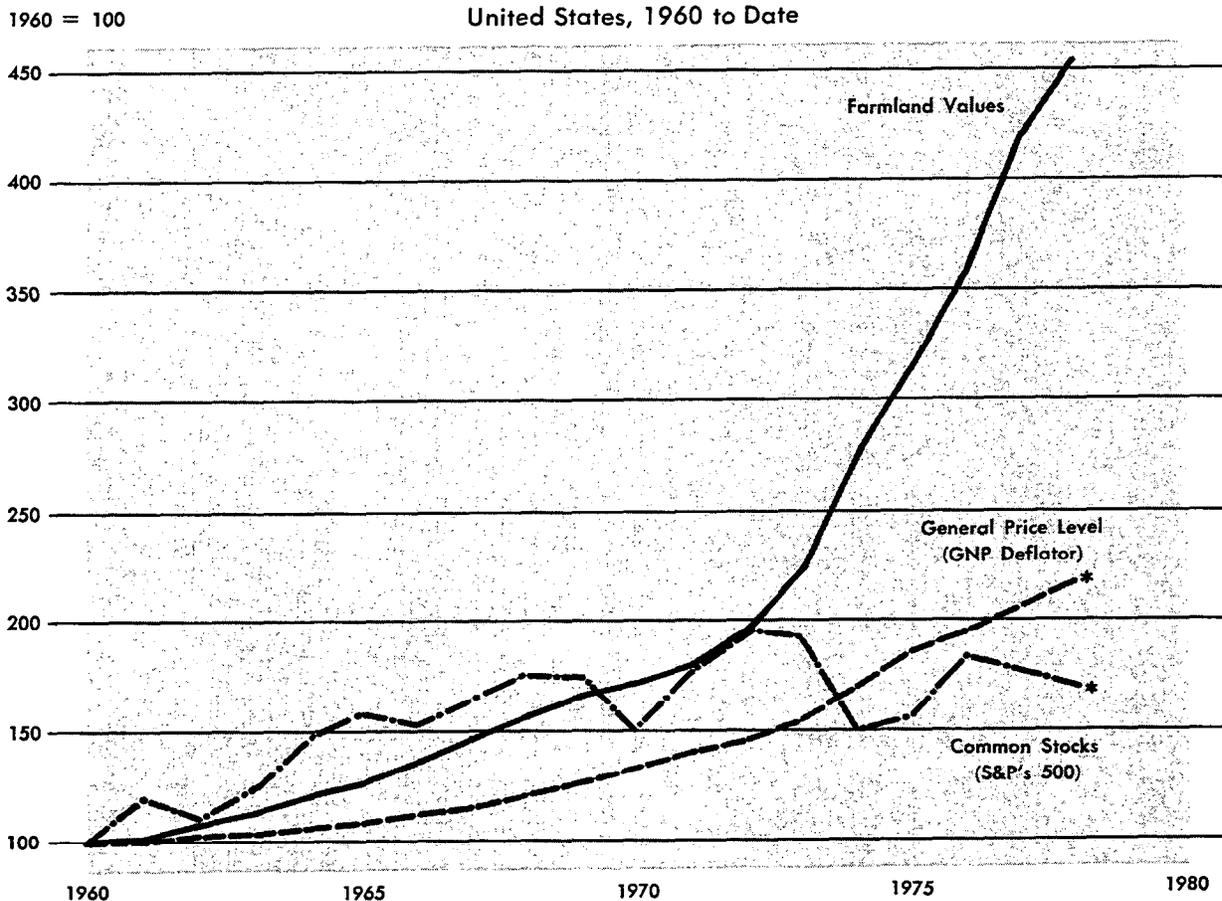
Duke itself does not plan to develop the property—quite unlike the real estate venture by Campbell College at nearby Buies Creek in 1975. At that time, Campbell opened a 371-acre residential development, including a golf course, tennis courts, and a swimming pool.

Since United States farmland has become such an attractive investment, foreigners have joined the ranks of nonfarm investors in recent years in buying large tracts of the nation's farm real estate. Whether these foreign interests are oil-rich Arabs, Italian grain magnates, German industrialists, bankers from the Netherlands, or tycoons from Argentina, these eager buyers may well have helped to drive the price of land up. Most popular spot for foreign investors is California, but they are also reported to be purchasing land in the Midwest and Southeast, including this five-state area. Among the few foreign transactions known to have taken place in the Fifth District is the Italian-owned Open Grounds Farm, Inc., located in Carteret County, North Carolina. This 42,000-acre tract of farmland, timberland, and marsh, is currently being used to produce cattle and feed crops.

Foreign investments in this country's farmland have received a great deal of publicity, partly because foreign buyers have made large, lump sum payments. Moreover, their investments have raised a number of economic and political questions, as well as some emotions. The best information now available indicates that the amount of United States farmland owned by foreigners is only around 1 percent. Recent reports from the Department of Agriculture conclude that thus far the amount of farmland presently owned

¹¹ Vaden, *News and Observer*, p. 1.

Chart 4

FARMLAND AS A HEDGE AGAINST INFLATION

* 1978 data are for 9 months only.

Sources: U. S. Department of Agriculture, U. S. Department of Commerce, and Council of Economic Advisors.

by foreign investors has had no significant impact on the nation's farmers or on the agricultural economy.

Population Pressures Boost Values¹² The competing demands for farmland stemming from population pressures come in many different forms and usually have a considerable impact on local farmland prices. The "back-to-the-country" trend, suburbanization, purchases for second homes or retirement homes, development of recreational facilities, and industrialization are all reflections of these pressures.

That the market for rural land is undergoing some significant pressures from the population is clearly evident in both the District and the nation. Consider the "back-to-the-country" trend. Since 1970, for the

first time in decades, the population of nonmetropolitan counties has grown faster than that of the metropolitan areas. This phenomenon, which has occurred in both the District and the nation, is unprecedented. Districtwide, statistics show that between 1970 and 1975 population in the nonmetro counties rose by 6.6 percent, as against 5.1 percent in the metro areas. Net immigration in the nonmetropolitan counties totaled around 214,100, compared with some 127,600 in the metropolitan areas. Generally, the fastest nonmetro growth has occurred in counties bordering metro areas. But the nonmetro population gain has not been limited to the spillover from the cities—to suburbanization, that is.

Rural population growth has by no means been evenly distributed. Some counties, in fact, are still losing population. But where population has shifted from metro to nonmetro areas, the shuffle has added to the demand for farmland, as has the population

¹² USDA, Economics, Statistics, and Cooperatives Service, "Population Shuffle," *The Farm Index*, Vol. XVII, No. 6 (Washington, June 1978), pp. 4-6; Healy and Short, *The Appraisal Journal*, pp. 195-197.

dispersal from the central cities to the suburbs. Where this demand has been strong, market values have soared. This situation is amply illustrated in the accompanying table showing net gains in population and increases in farmland values in specified nonmetro and metro counties (see Charts 5 and 6).

Some population pressures have resulted from the increased job opportunities in rural areas as well as the availability of jobs in the suburbs. Moreover, the desire for the amenities of rural life, coupled with a widespread system of good roads, makes long-distance commuting both desirable and practicable for many. The strong wave of movement to the country and the resulting boom in farmland prices is well illustrated by the nonmetro county of Spotsylvania, Virginia. There, with net immigration at 22 percent between 1970 and 1974, land values jumped sharply, rising 177 percent during the five years ending in 1974. Many who migrated to Spotsylvania were former residents of the nation's capital and its environs and continue to commute to their jobs by bus (see Table and Chart 6).

Much of the pressure for rural land has come increasingly from people who are buying land for second homes or for retirement homes. Generally, many of these people have chosen such places as the North Carolina highlands or sandhills. Coastal areas, reservoirs, lakes, and the foothills are other favorite locations. Moreover, some urbanites, in response to rising farmland prices, have bought rural acreage far ahead of actual need to make sure they have their "place in the country" when retirement time rolls around.

Demand for rural land to be used in recreational pursuits has also been on the upswing. Such developments can and often do take good land out of agricultural use forever. But with today's leisure-oriented society, growing pressure for recreational facilities is not surprising. Ski centers with their lodges and slopes and accompanying real estate complexes, 18-hole golf courses, tennis on mountain and valley courts as well as in the lowlands, lands owned or leased by hunting clubs, "theme" parks, and facilities oriented to campers are but some of the recreational developments now occupying a great deal of acreage that once was farmland. The resort complex in Watauga County, North Carolina—a nonmetro county—provides an excellent example of how this type demand has influenced land values (see Table and Chart 6).

Other Nonfarm Influences The demand structure for farmland has changed significantly over the years as many new uses and demands have been

NET GAINS IN POPULATION AND INCREASES IN FARMLAND VALUES

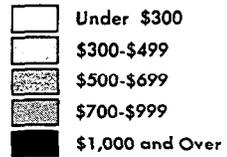
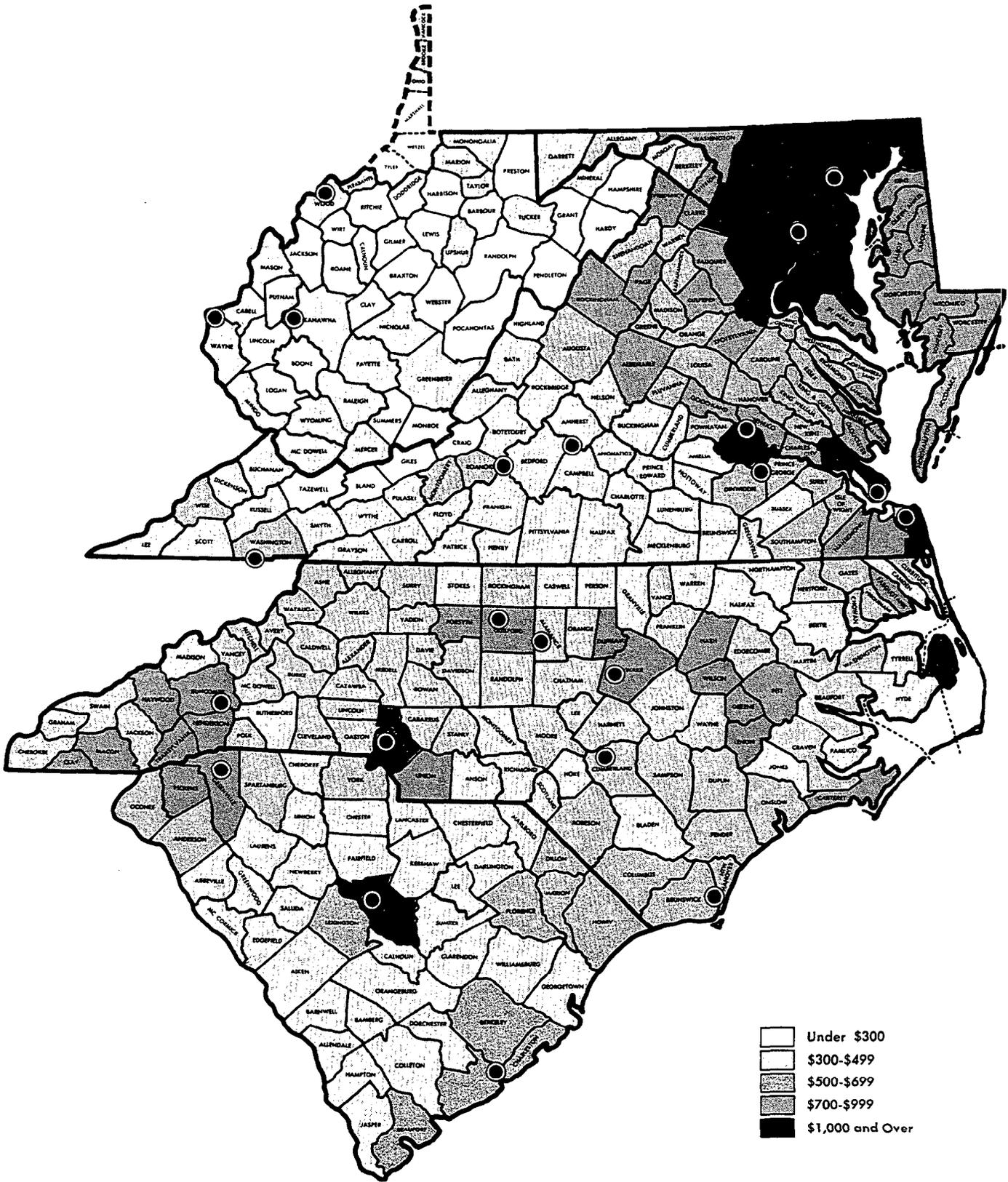
Specified Counties, Fifth District, 1969-1974

County and State	Net Migration	Gains in
	1970-1974	Farmland Values
	Percent	1969-1974
	Percent	Percent
Nonmetropolitan Counties		
Calvert, Md.	16.1	71.3
Worcester, Md.	6.1	142.7
Albemarle, Va.	16.0	81.5
Louisa, Va.	16.6	125.0
Orange, Va.	10.8	137.1
Spotsylvania, Va.	22.0	177.2
Stafford, Va.	13.4	127.6
Warren, Va.	15.1	102.7
Barbour, W. Va.	8.5	126.7
Berkeley, W. Va.	8.0	100.6
Hampshire, W. Va.	8.9	118.6
Jefferson, W. Va.	8.8	111.2
Jackson, N. C.	12.2	102.6
Macon, N. C.	10.5	108.1
Polk, N. C.	8.4	153.4
Watauga, N. C.	17.7	83.0
Horry, S. C.	14.3	66.7
Orangeburg, S. C.	5.0	55.7
Metropolitan Counties		
Carroll, Md.	12.5	101.2
Harford, Md.	11.3	79.8
Chesterfield, Va.	21.8	106.2
Gloucester, Va.	16.7	177.3
Montgomery, Va.	12.6	103.2
New Kent, Va.	23.9	102.3
Powhatan, Va.	32.1	142.9
Brunswick, N. C.	26.0	106.6
Currituck, N. C.	33.8	106.8
Orange, N. C.	12.1	85.5
Dorchester, S. C.	23.1	90.5
Lexington, S. C.	19.6	76.2
Pickens, S. C.	10.1	140.7

Source: U. S. Bureau of the Census.

FARM REAL ESTATE: AVERAGE VALUE PER ACRE

Fifth District by Counties, 1974



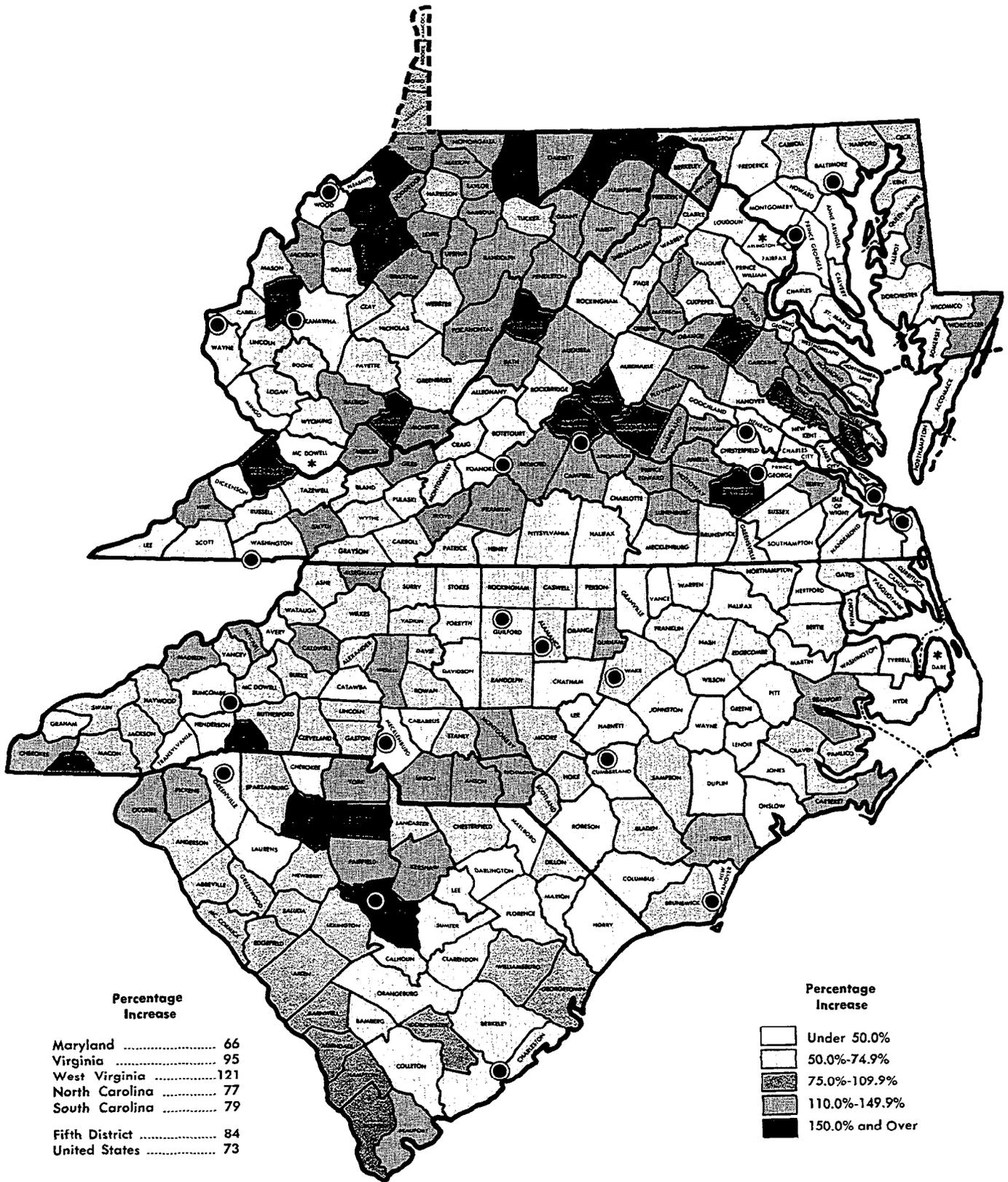
● Cities of the Standard Metropolitan Statistical Area.

Source: U. S. Bureau of the Census.

Chart 6

FARM REAL ESTATE: CHANGE IN AVERAGE VALUE PER ACRE

Fifth District by Counties, 1969-1974



* Data not published in 1969 for counties with less than 10 farms to avoid possible disclosure of information for individual farms.

● Cities of the Standard Metropolitan Statistical Area.

added to the normal demands for land for farming purposes. When these demands for farmland result in strong competition between agricultural and non-agricultural uses, the value of such land typically rises. The conversion of farmland to nonfarm uses, such as commercial-industrial developments, shopping centers, highways, airports, and the like, not only increases the value of that land but also has a carry-over effect on the value of surrounding land.

The trend towards industrial parks has added significantly to the demand for farmland. Forward-looking industrial establishments want land not only as sites for new plants but also for future expansion. Today's modern, well-engineered plants require sizable acreage. Since industry is often willing to pay more for land than farmers, pressure from industry can be significant in some areas. With the economic development that has occurred in the Fifth District over the past couple of decades, in rural as well as in urban areas, it seems safe to say that industrial demand for land has played a major role in the escalation of farmland prices.

Development of the interstate highway system has also had a major impact on farmland prices. One mile of interstate highway requires nearly 40 acres, while a single interchange may take another 10 acres.¹³ The dual lanes of asphalt or concrete such as I-95, cutting across the Fifth District and extending north and south up and down the East Coast, became wands of magic that sent farmland prices skyrocketing. On the average, land values per acre along the North Carolina segment zoomed from a low of \$1,684 in 1955 to a high of \$26,611 in 1963.¹⁴ And owners of farm property adjacent to interchanges reaped even bigger windfalls. The strong demand for land exerted by the interstate highway program aptly illustrates that location value is often more important as a price-making factor in the land market than productive value.

FARM ASSET VALUES AND EARNINGS

Farm real estate, a farmer's major production asset, has dominated the capital structure of agriculture for many decades. The value of farmland, in fact, has comprised from three-fourths to four-fifths of the total market value of all farm production assets—those assets used in the production of farm prod-

ucts—since the early sixties. With the generally strong farmland market of the past several decades, the value of farm real estate in this five-state area totaled an unprecedented \$26.9 billion by 1978, up from \$11.5 billion in 1970 and \$2.3 billion in 1940 just prior to World War II.

Rising farmland prices, therefore, lead to increasing asset values. As the growth in asset values has improved the asset position of landowners' balance sheets, it has resulted in substantial gains in proprietors' equities, enabling them to expand their borrowings and to use the higher priced farmland as collateral. But with the rapidly rising land prices of recent years, farmers who have recently invested large sums in farmland and other capital items have been finding it increasingly difficult to meet their debt payments out of net farm income.

Over the years, many attempts have been made to explain rising farmland prices. The traditional hypothesis states that farm income is the basic factor influencing farmland values.¹⁵ But as noted in the historical perspective above, this hypothesis fell into disrepute in the midfifties when farmland prices continued to rise without an accompanying increase in net farm income. By and large, this apparent paradox continued through 1977, puzzling land appraisers, prospective land buyers, and farm lenders alike. This departure from the historic relationships between farmland prices and farm income has stimulated many analysts to search for possible explanations. Many different factors or explanations have been forthcoming, some undoubtedly having more validity in certain geographic areas than in others.

In a recent discussion of this subject, Emanuel Melichar of the Board of Governors of the Federal Reserve System challenged many past analyses.¹⁶ Net farm income, he noted, is a return not only to farm assets but also to operators' labor and management. The amount and probable value of farm operators' labor have fallen sharply in recent decades, and thus an increasing proportion of total net farm income must be regarded as a return to production assets. Melichar then pointed out that U. S. Department of Agriculture estimates show that such annual

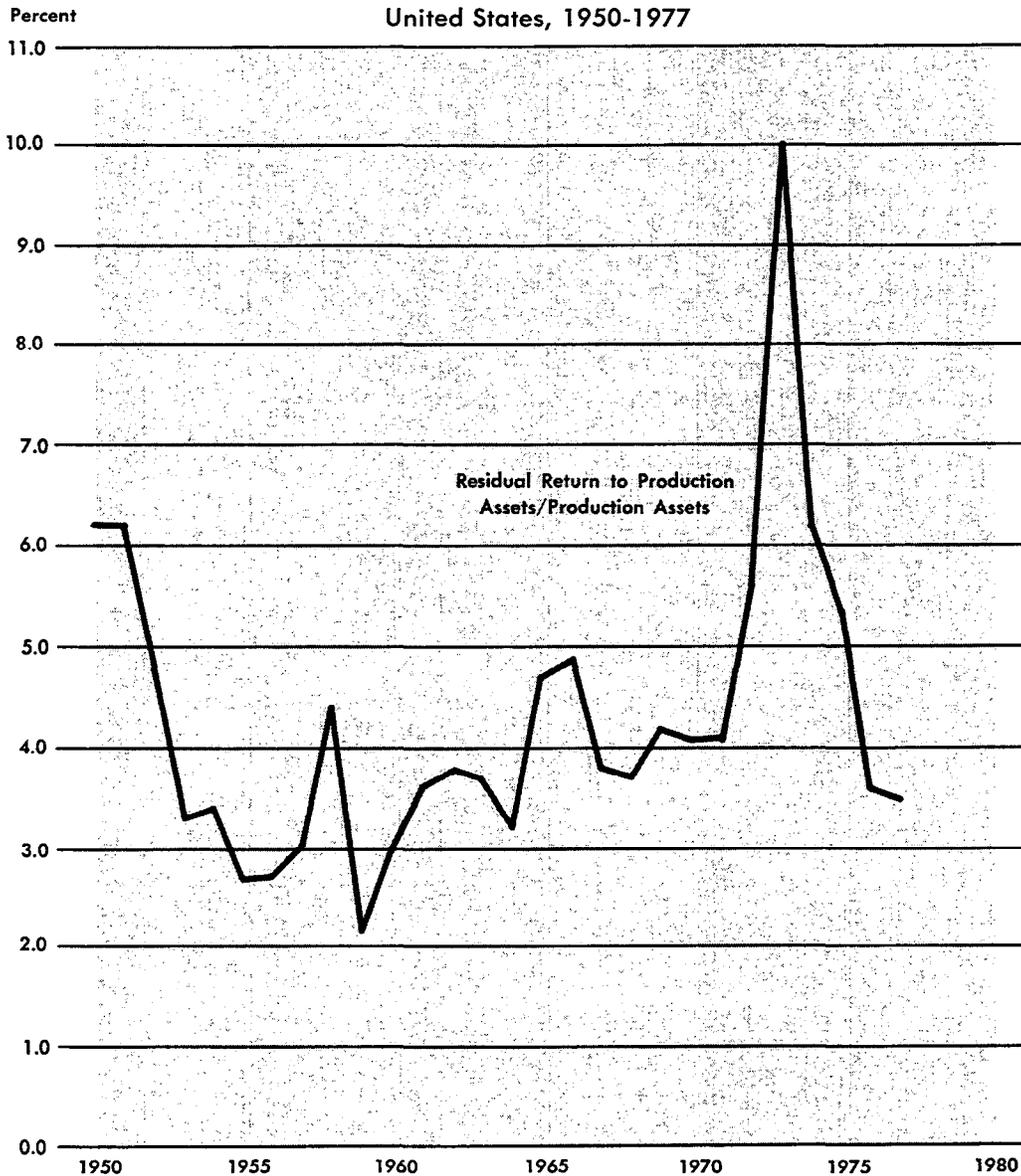
¹³ William H. Scofield, "Values and Competition for Land," *The Yearbook of Agriculture, 1963*, USDA (Washington: Government Printing Office, 1963), p. 64.

¹⁴ Dick Brown, "Land Values Soar as Interstate Routes Expand," *News and Observer* (Raleigh, May 19, 1968), Sunday Reading Sec., p. 1.

¹⁵ John Brake, "A Perspective on Future Capital and Credit Needs of Agriculture" (Remarks prepared for the meeting of the National Agricultural Credit Committee, Chicago, Illinois, September 24, 1973), p. 2.

¹⁶ See Emanuel Melichar, "The Relationship Between Farm Income and Asset Values, 1950-1977" (Paper presented at the Seminar on Food and Agricultural Policy, Spring Hill Center, Wayzata, Minnesota, March 27, 1978), pp. 1-13.

Chart 7

RATES OF RETURN TO FARM PRODUCTION ASSETS

Sources: U. S. Department of Agriculture and Board of Governors of the Federal Reserve System.

residual returns to production assets rose faster than the value of those assets over the period 1954-1971.¹⁷ The rate of return to assets thus increased even though land prices were rising—an observation quite contrary to the commonly held view (see Chart 7).

While the rising trend in returns to production assets has gone unnoticed by most observers, many have noted that the major purchasers of farmland have been the large farmers who, for the most part, have above-average rates of return. These farmers,

mostly those with sales of \$100,000 and over, have been prominent in buying farmland for farm expansion, and it is believed that their purchases have had a marked influence in determining the price of farmland. Indeed, it appears that these farmers have been setting the tone of the rural land market. Therefore, as Melichar has pointed out, it seems logical that “. . . farm real estate might be priced at the return achieved by these [large] farms capitalized at their cost of borrowing funds.”¹⁸

¹⁷ Melichar, “The Relationship Between Farm Income and Asset Values, 1950-1977,” p. 8.

¹⁸ Melichar, “The Relationship Between Farm Income and Asset Values, 1950-1977,” p. 12.

FINANCING REQUIREMENTS RISE

Someone has said, and rightly so, that “. . . the lending of money is the keystone of most land purchases.”¹⁹ While rising farmland prices lead to increasing asset values, as indicated above, they also create greater financing requirements.

The amount of money borrowed in relation to the purchase price of farmland, for example, trended upward steadily from a low of 54 percent in 1951 to a high of 78 percent in 1973.²⁰ Moreover, the debt-to-purchase-price ratio has averaged around 76 percent in the years since. Some of the increase in the amount of debt relative to the purchase price of farmland has been due, however, to the increasing proportion of farm transfers comprised of purchases by

farmers to enlarge their farms.²¹ Under such conditions, the prospective buyer can use his existing farm as security when borrowing to buy the additional land, oftentimes reducing the amount of cash required for a downpayment.

Moreover, the proportion of farm real estate transfers for which credit was used has been climbing steadily. While credit financing was involved in 54 percent of all farmland transfers in 1951, the proportion was up sharply by 1978 when credit-financed transfers comprised 89 percent of the total (see Chart 8).

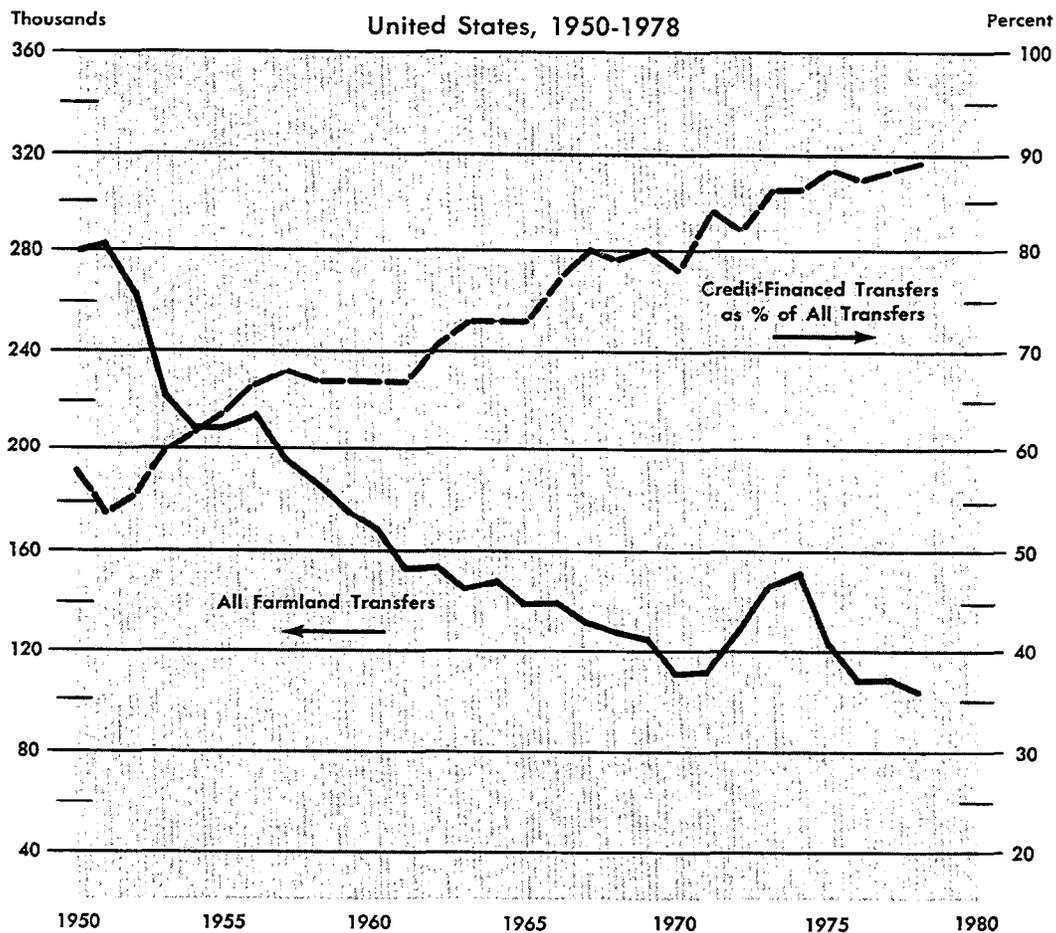
Demand for Borrowed Funds Strong With roughly nine out of ten farmland transfers now financed with borrowed funds, it should come as no

¹⁹ USDA, *The Farm Index*, March 1977, p. 13.

²⁰ Data used in this paragraph apply only to credit-financed farmland transfers.

²¹ Paul L. Holm and William H. Scofield, “The Market for Farm Real Estate,” *The Yearbook of Agriculture, 1958*, USDA (Washington: Government Printing Office, 1958), p. 205.

Chart 8
**FARMLAND TRANSFERS AND THE GROWING
PROPORTION FINANCED BY CREDIT**



Source: U. S. Department of Agriculture.

surprise that farm real estate indebtedness of the District's farmers at the beginning of 1978 hit \$3,083 million, a record January 1 high and more than 11 times the \$277 million outstanding on the same date in 1940. Over this 38-year period, the volume of farm-mortgage credit outstanding grew at an average annual rate of 6.5 percent—almost as fast as the 6.7 percent yearly increase in the total value of farm real estate. Greatest expansion in the use of farm real estate credit has occurred since 1972, with District farmers boosting their outstanding debt at an annual rate of 13.0 percent—faster even than the yearly rates of gain in farmland value per acre and in the total value of all farmland. Moreover, the rate was somewhat higher than the 11.9 percent rate of increase in farm-mortgage indebtedness nationally.

Because of the burgeoning demand for farm-mortgage credit, the sources of credit have become increasingly important in paving the way for transfers of farmland. The availability of credit is, unquestionably, the one ingredient that affects nearly all purchases of farmland, regardless of location.²² And closely tied to credit availability, of course, is the average interest rate charged on farm real estate loans, or the cost of borrowing. Generally, when credit availability for farm-mortgage loans tightens, the move is reflected in higher interest rates. But higher interest rates do not always signify tighter credit conditions. Last year, for example, farmers in general did not find it difficult to arrange loans, but interest rates—like most everything else—moved higher.

The Principal Lenders Who is providing the large sums of money required to finance purchases of today's high-priced farmland? By far the major share of funds for financing new farm capital has traditionally been provided by farmers themselves.²³ But in recent years as their capital needs have expanded sharply, farmers generally have relied increasingly on borrowed funds. The modern-day Fifth District farmer finds that today's major institutional lenders are, according to volume, the Federal land banks, commercial banks, Farmers Home Administration, and life insurance companies. The relative importance of seller financing, mostly by individuals, has declined over the years. But by still providing slightly more than one-fifth of the credit

²² USDA, *The Farm Index*, March 1977, p. 12.

²³ Alvin S. Tostlebe, *Capital in Agriculture: Its Formation and Financing since 1870*, A Study by the National Bureau of Economic Research (Princeton, N. J.: Princeton University Press, 1957), p. 19.

volume outstanding, sellers continue as the second largest source of loan funds for buying farmland.

Competition between lending agencies intensified in the postwar years, and major shifts occurred in the shares of outstanding farm-mortgage loans held by the principal lender groups. Districtwide, the greatest competition was between the Federal land banks and commercial banks. The Federal land banks have steadily increased their share of total farm-mortgage credit since the midfifties, becoming the major institutional lender in 1960 and increasing their hold on this position almost every year since. Half the farm real estate loan volume outstanding for the past couple of years, in fact, has been provided by the Federal land banks.

Meanwhile, commercial banks' share of farm real estate credit held at around one-fifth of the total from 1960 through the early seventies. Financing by banks has been declining since and now stands at 14 percent—far below their relative position among the institutional lenders during the late forties and fifties when banks played the leading role in financing farmers' long-term credit needs. District banks, however, continue to play a relatively more important role in the farm-mortgage field than banks nationwide.

Life insurance companies and the Farmers Home Administration have not been as active in extending credit to District farmers as have commercial banks and the Federal land banks. Life insurance companies' relative position in farm real estate lending has followed a downward trend since 1960, with their share dropping to 5 percent by 1978. While the proportion of long-term financing supplied by the FmHA has followed an up-and-down pattern for the past several decades, it has also trended downward since the early seventies and now accounts for around 8 percent of the total outstanding.

IN SUMMARY

Farmland is, indeed, an increasingly valuable asset. With the generally strong farmland market of the past several decades, the value of farm real estate in this five-state area totaled an unprecedented \$26.9 billion in 1978, up from \$11.5 billion in 1970 and \$2.3 billion in 1940 just prior to World War II.

While rising farmland prices have led to increasing asset values, they have also created greater financing requirements. Roughly nine out of ten farmland transfers are now financed with borrowed funds. Moreover, borrowed funds make up around three-fourths of the purchase price of each transfer. Outstanding farm-mortgage debt in the District has

thus grown significantly, hitting a record \$3.1 billion at the beginning of 1978. Half this loan volume was held by the Federal land banks.

Land is presently selling at premium prices. Much of the current boom in farmland values began back in 1972 with the huge sale of grain to Russia. Market values have more than doubled in the six years since.

Both supply and demand factors play strong roles in determining the price of farmland. The supply of farms for sale is limited, which sets the stage for stiff competition and higher bidding when demand increases. Many factors influence buyers of farmland on the demand side, however. Generally, they fall into two categories—either demand by farmers or by nonfarmers.

Farmers who want to enlarge their farming operations are still the leading buyers. Their demand is one of the strongest factors forcing prices upward. Growth in part-time farming has also become an important factor in the land market, as has the non-farm income of full-time farmers and their families.

Land purchased for nonfarm uses has become an increasingly important influence competing in farm real estate markets. Among the factors that have lured nonfarmers into the land-buying rush since 1972, these stand out: population pressures, including the "back-to-the-country" trend, purchases for second homes or retirement homes, and development of recreational facilities; conversion of farmland to nonfarm uses, such as commercial-industrial developments, shopping centers, highways, and the like; the disappointing performance of the stock market; and investment in farmland as a hedge against inflation.

The would-be buyer, seriously considering getting into the land market, would do well to remember:

- The market value of farmland depends on its potential use. Generally, the more intensive the use, the higher the price.
- The smaller the farm tract purchased, the higher the price per acre.
- Market values of different sizes and types of farms vary widely.
- Location value is oftentimes more important as a price-making factor than productive value.
- Few alternative investment opportunities since 1960 have been as profitable and as safe a hedge against inflation as has farmland.

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